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U. S. DEPARTMENT OF AGRICULTURE,  
BUREAU OF STATISTICS—CIRCULAR 18.

VICTOR H. OLMSTED, Chief.

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# TOBACCO DISTRICTS AND TYPES.

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By

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## LETTER OF TRANSMITTAL.

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U. S. DEPARTMENT OF AGRICULTURE,  
BUREAU OF STATISTICS,  
*Washington, D. C., July 14, 1909.*

SIR: Mr. J. P. Killebrew, special agent on tobacco, Bureau of Statistics, has prepared the article herewith transmitted to you, which describes briefly the several tobacco districts of the United States, the types of tobacco grown, and the methods of handling the crops. To meet requests made for this information, I have the honor to recommend its publication as Circular 18 of this Bureau.

Respectfully,

VICTOR H. OLMSTED,  
*Chief of Bureau.*

Hon. JAMES WILSON,  
*Secretary of Agriculture.*

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## CONTENTS.

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	Page.
Tobacco districts and types.....	3
New England.....	5
New York.....	6
Pennsylvania.....	6
Ohio—Miami Valley.....	7
Wisconsin.....	7
Georgia and Florida.....	8
Burley district.....	9
Dark districts of Kentucky and Tennessee:	
Paducah district.....	10
Henderson or Stemming district.....	11
Upper Green River district.....	12
Upper Cumberland district.....	12
Clarksville and Hopkinsville district.....	12
Virginia sun-cured district.....	13
Virginia dark district.....	14
Bright Yellow district:	
Old belt—Virginia and North Carolina.....	14
New belt—Eastern North Carolina and South Carolina.....	15
Maryland and Eastern Ohio export.....	15
Perique—Louisiana.....	16

## TOBACCO DISTRICTS AND TYPES.

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Tobacco, according to census reports, is grown to a greater or less extent in every State and Territory of the continental United States, excepting Colorado, Nevada, Rhode Island, and the District of Columbia. More than 99 per cent of the crop, however, is raised east of the Mississippi River, where, with the exceptions noted, every State and almost every county is a more or less important producer. Kentucky, the largest producing State—sometimes raising a crop about equal to that of the three next largest contributing States combined—produces more than one-third of the total United States crop; or, in terms of broader comparison, this single State, in average years, grows about one-ninth of the entire crop of the world. Of the small quantity grown west of the Mississippi, nearly all is either in States bordering it or in Texas, a State where the culture is rapidly expanding.

Tobacco production in the United States on a commercial scale is confined to certain clearly defined districts, each producing a different special type and filling a demand for that type. In numbers of counties outside of these specific districts only small quantities are grown—quantities which do not enter commercial channels, but are consumed by the growers themselves or in their immediate neighborhood.

The tobacco crop of the United States consists of two general types: (1) Cigar type; (2) chewing, smoking, snuff, and export types. The tobacco districts are classified in reports of the Bureau of Statistics, Department of Agriculture, as producers of one or the other of these two general types. The production, by districts, in 1899, as indicated by the Twelfth Census, and by districts and types, in 1908, as per the first of a series of annual quantitative estimates,

by types, recently undertaken by the Bureau of Statistics, Department of Agriculture, is shown in the following statement:

*Tobacco production by types and districts.*

Type and district.	Production.	
	1899 (Census).	1908 (Bureau of Statistics).
<i>I. Cigar type.</i>		
New England.....	Pounds.	Pounds.
New York.....	23,778,394	31,194,320
Pennsylvania.....	13,958,370	7,257,975
Ohio—Miami Valley.....	41,502,620	39,008,000
Wisconsin.....	48,651,950	25,500,000
Georgia and Florida.....	45,500,480	39,550,000
Texas.....	1,711,100	8,274,375
	550,120	2,400,000
<i>II. Chewing, smoking, snuff, and export types.</i>		
Burley district.....	158,142,970	35,000,000
Dark districts of Kentucky and Tennessee:—		
Paducah district.....	51,538,270	60,000,000
Henderson or Stemming district.....	88,134,390	70,000,000
Upper Green River district.....	6,699,970	20,000,000
Upper Cumberland district.....	3,861,880	10,000,000
Clarksville and Hopkinsville district.....	73,802,660	72,000,000
Virginia sun-cured district.....	8,354,290	8,000,000
Virginia dark district.....	61,742,120	57,000,000
Bright yellow district:—		
Old belt—Virginia and North Carolina.....	108,449,680	114,000,000
New belt—eastern North Carolina and South Carolina.....	83,761,560	94,000,000
Maryland and eastern Ohio export.....	27,223,500	20,000,000
Perique—Louisiana.....	102,100	86,700

According to the method of curing, tobacco is divided into three classes—air-cured, flue-cured, and fired. In the process of air curing, the leaves are cured by a natural process, no artificial heat being used. In flue curing, artificial heat to the desired degree is applied by means of flues built in the earth under the barns. The smoke is carried off in pipes and not allowed to come in contact with the tobacco. In fired tobacco open wood fires are made under the tobacco hanging in the barns, the smoke and heat passing through it and out through the roof. The tar, creosote, and other products of combustion impart to the fired tobacco a peculiar flavor, very popular in some European countries, but not found in tobacco cured by other processes. Artificial heat is sometimes applied to air-cured tobacco when, in excessively warm rainy weather, damage from pole sweat or stem rot is threatened. Methods of curing are more fully described in Farmers' Bulletin No. 60, issued by Prof. Milton Whitney, Chief of the Bureau of Soils.

In the manufacture of cigars, wrappers, binders, and fillers are necessary; each district growing cigar types produces tobacco for one or more of these uses. In districts growing wrappers and binders, the low grades and damaged leaves are used to some extent for fillers; but, being of inferior quality, they are used mostly for export. The cigar type grown in the various districts of the United States

enters mostly into domestic consumption, only a small per cent—consisting of low-grade fillers—being exported.

#### NEW ENGLAND.

This cigar-type district comprises the following counties: Fairfield, Hartford, Litchfield, Middlesex, New Haven, and Tolland, in Connecticut; Franklin, Hampden, and Hampshire, in Massachusetts; Windham, in Vermont; and Cheshire, in New Hampshire. The principal production is in the Housatonic and Connecticut valleys, extending through Connecticut and Massachusetts into the southern part of New Hampshire and Vermont.

Three varieties are grown, Habana seed, Connecticut broadleaf, and Cuban shade. The average yield is 1,600 to 1,800 pounds per acre, although more than 2,000 pounds per acre are often produced on individual farms.

The plants are grown under glass for early and under screens of cotton cloth for later planting. Transplanting is done by machine, in rows from 3 to  $3\frac{1}{2}$  feet apart; Habana-seed plants are set 15 to 18 inches apart in the row, broadleaf, 24 to 30 inches. The usual and best time for transplanting is from May 20 to June 15, that period usually being warm enough to cause prompt growth of the plants. If the season be favorable the tobacco is ready for harvest from July 25 to September 10, a period when the weather is most favorable for curing. The crop is air cured. Recent experiments in curing by artificial heat, however, give promise of satisfactory results. Heavy losses from pole burn and stem rot are sometimes caused by damp warm weather while the tobacco is air curing; the object in using artificial heat is to prevent this damage.

After the tobacco is thoroughly cured the leaves are stripped from the stalks, tied in bundles of about 40 pounds each, wrapped in heavy paper, and delivered to the packer, who sometimes contracts for it before it is put in bundles.

In the hands of the packer the tobacco is first assorted into the different grades and lengths of wrappers, binders, and fillers, then packed in cases of 300 to 350 pounds each and allowed to ferment. After fermentation it is sold at private sale to manufacturers or dealers by sample, one sample, consisting of four hands, being drawn from each case. Light wrappers command the highest price of any of the grades, and are the profitable part of the crop, the value of which is in proportion to the per cent of light wrappers it contains. There is very little profit in growing a crop in which there are no light wrappers. It is customary to cut the entire stalk and let the leaves cure on the stalk, but recently experiments of priming in the field have been tried, each leaf being broken off as it ripens and hung on laths to cure. The priming process, which seems to improve the

quality and to increase the per cent of wrappers, may become general if future experiments are as successful as those during the last two years.

Some shade-grown tobacco is produced in this district, a full description of which is given in Bulletin No. 138, Bureau of Plant Industry.

#### NEW YORK.

Two districts grow tobacco in this State—the Onondaga, comprising Onondaga, Oswego, Cayuga, and Wayne counties, and the Big Flats district, composed of the counties of Steuben, Chemung, Tioga, and Tompkins. That grown in the Big Flats is characterized by larger growth than that in the Onondaga district.

The time and methods of planting, harvesting, and curing are about the same as in New England, excepting that no tobacco is primed. The finished product, too, is similar to that of New England, but it does not yield so large a per cent of wrappers, is of inferior quality, and brings a lower price. The cured leaves are stripped from the stalk, tied in bundles by the growers, and sold to packers, who pack them in cases of 300 to 350 pounds each. They are then put in warehouses for fermentation in the case, and sold by sample to the trade at private sale.

In the Onondaga district the yield per acre is from 900 to 1,300 pounds, and in the Big Flats from 1,100 to 1,600 pounds.

#### PENNSYLVANIA.

In this State tobacco is grown in the following counties: Bradford, Berks, Chester, Clinton, Juniata, Lancaster, Lebanon, Lycoming, Northumberland, Tioga, and York. Lancaster County grows nearly 70 per cent of the Pennsylvania crop, and usually produces more tobacco than any other county in the United States. The census gives the production in this county in 1899 as 28,246,160 pounds.

Transplanting is done by machine—rows 3 to  $3\frac{1}{2}$  feet apart, distance between plants in the row 24 to 30 inches. The usual time of transplanting is June 1 to June 25. The crop should go into the sheds between August 20 and mid-September. The whole plant is cut, hung on laths in sheds, and air cured. When cured, the leaves, stripped from the stalk by the grower, are delivered to the packers, who usually contract for the crop before it leaves the shed. By the packer the tobacco is assorted into the various grades and lengths, packed in cases of from 300 to 350 pounds each, and allowed to ferment. A sample is then drawn from each case, by which the case is sold. All sales are private, there being no public auction in this district.

A small per cent of the crop is used for wrappers and binders, but most of it, being too heavy bodied for those purposes, is used for fillers.

The average yield per acre is from 1,200 to 1,500 pounds.

#### OHIO—MIAMI VALLEY.

The following are the tobacco-growing counties of the Miami Valley: Butler, Champaign, Clark, Clinton, Darke, Greene, Medina, Mercer, Miami, Montgomery, Preble, Shelby, Warren, and Wayne. Three varieties are grown—Zimmer's Spanish, which constitutes about one-half of the crop; Gebhardt or Seed Leaf, about one-third; and Little Dutch, about one-sixth. The proportion varies with demand and price, but this is about the average relative production of the three varieties.

Transplanting is usually done from the latter part of May to June 25—Zimmer's Spanish and Little Dutch (both of small growth with short leaves) in rows 3 feet apart and plants 20 to 24 inches apart in the row; Gebhardt, in rows  $3\frac{1}{2}$  feet apart and plants 30 to 36 inches apart in the row. Machines are used almost exclusively for transplanting.

Wayne and Medina counties, not properly a part of the Miami Valley, grow a larger per cent of wrappers and binders than the valley proper. The valley is a filler district, and produces in the Zimmer's Spanish some of the best fillers grown in the United States.

The crop is harvested August 15 to September 15, by cutting the whole stalk, which is then hung on laths in sheds and air cured. The leaves are afterwards stripped from the stalks by the growers, put in cases, and delivered to packers, who have previously agreed with the growers on the price per pound. By the packers they are assorted into the various grades and lengths, repacked in cases 300 to 350 pounds in weight, and fermented. The tobacco is then ready to be sampled and sold. A small per cent, consisting mostly of low grades, is sold on the auction market at Cincinnati, but the greater per cent, in fact practically all the finer grades, is sold privately.

The average yield of Zimmer's Spanish and Little Dutch is from 800 to 1,000 pounds per acre; of Gebhardt from 1,200 to 1,500.

#### WISCONSIN.

Barron, Columbia, Crawford, Dane, Grant, Green, Iowa, Jefferson, La Crosse, Monroe, Richland, Rock, Trempealeau, and Vernon are the tobacco-growing counties of this State.

Wisconsin is known to the tobacco trade as the binder State; fully 75 per cent of its product is used for binders when favorable conditions produce a good crop. When planting is late and the growing season unfavorable more fillers are made.

Machines are used for transplanting, which is usually done from June 1 to June 25—rows 3 feet apart and plants 15 to 20 inches apart in the row. Sometimes planting is later, but the resulting crop is usually low-grade tobacco.

The tobacco is harvested, usually between August 15 and September 10, by cutting the entire plant, which is then hung on laths, put in sheds, and air cured. After curing the leaves are stripped from the stalks, put in bundles of about 40 pounds each, wrapped with heavy paper, and delivered to the packers, by whom they are assorted into grades and lengths, and packed in 300 to 350 pound cases. After fermentation the tobacco is ready to be sampled and sold. Sales are private, there being no auction sales in this State.

The usual yield per acre is from 1,000 to 1,500 pounds, with an average of about 1,150.

#### GEORGIA AND FLORIDA.

Decatur, Grady, and Thomas counties, Georgia, and Gadsden and Leon counties, Florida, constitute this tobacco district.

Two varieties are grown—one from Cuban seed and one from seed from Sumatra. Sumatra tobacco is grown for wrappers, Cuban for both wrappers and fillers. Wrappers, grown mostly under shade, are known as shade-grown tobacco, and fillers, grown without shade, as sun-grown tobacco. Some wrappers are, however, selected from sun-grown tobacco. A full description of the method of growing tobacco under shade in the Connecticut Valley, which is similar to Georgia and Florida, is given in Bulletin No. 138, Bureau of Plant Industry.

Transplanting usually begins the latter part of March and continues until mid-May, most of the crop being planted in April. The rows are 4 feet apart and plants in the row 10 to 16 inches apart for shade-grown and 15 to 18 inches for sun-grown. Transplanting was formerly all done by hand, the plants being watered as set out, but recently a large part of the crop has been transplanted by machines. In transplanting shade-grown tobacco the post row must be set by hand.

Harvesting usually begins about mid-June and is finished by August 1. The shade-grown tobacco is harvested by priming the leaves as they ripen, stringing them on laths, and hanging them in sheds to cure. A part of the sun-grown is also primed, but most of it is harvested by cutting the stalks and hanging them on laths. The crop is all air-cured and then tied in bundles, each stick of primed tobacco being tied with the string on which it is strung, the sun-grown tobacco being stripped from the stalks and tied in small bundles, or hands. The curing process over, the tobacco is put in

bulks and bulk-sweated, after which it is assorted into grades and lengths, packed in bales weighing from 160 to 180 pounds, sampled, and sold.

The yield of shade-grown tobacco is from 1,000 to 1,200 pounds per acre, and sun-grown from 600 to 800 pounds.

#### BURLEY DISTRICT.

The following counties constitute the Burley district: Anderson, Bath, Boone, Bourbon, Boyd, Boyle, Bracken, Bullitt, Campbell, Carroll, Carter, Casey, Clark, Fayette, Fleming, Franklin, Gallatin, Garrard, Grant, Green, Greenup, Harrison, Hart, Henry, Jefferson, Jessamine, Kenton, Larue, Lawrence, Lewis, Lincoln, Madison, Marion, Mason, Mercer, Montgomery, Nelson, Nicholas, Oldham, Owen, Pendleton, Robertson, Scott, Shelby, Spencer, Trimble, Washington, and Woodford in Kentucky; Adams, Brown, Clermont, Gallia, Hamilton, Lawrence, and Scioto in Ohio; Clark, Jefferson, Ohio, and Switzerland in Indiana; and Cabell, Lincoln, Mason, Putnam, and Wayne in West Virginia.

Transplanting is done both by machine and by hand. That by machine can be done at any time when the soil is sufficiently dry to be worked; that by hand is usually after rain, when the moist ground will enable the plant to take root and grow without watering. The rows are 3 to  $3\frac{1}{2}$  feet apart, and plants 14 to 20 inches apart in the row. The usual time for transplanting is May 25 to June 20.

Harvest time is August 20 to September 25. The stalks are cut, hung on tobacco sticks, transported to the barns, and air-cured. After thorough curing the leaves are stripped from the stalks and tied in small bundles, or hands, of 15 or 20 leaves each; the tobacco is then ready for the hogshead.

There are several different methods of selling. Buyers may visit the barns and make contracts for the unprized leaf at an agreed price per pound delivered at prizeing house; or—"the loose-floor method"—the tobacco is hauled unprized to the warehouse, where each grade is put in separate piles on the floor and sold at auction to the highest bidder, the grower having the right to reject unsatisfactory bids. By another method the tobacco is prized in hogsheads by the growers and sold by sample at auction or private sale on the markets of either Louisville, Ky., or Cincinnati, Ohio. All these methods are used in the Burley district. "Loose-floor" sales have been introduced recently and at present are held only in a few places. Prized hogsheads usually contain from 1,000 to 1,200 pounds each and are offered for sale both in winter order and redried. Winter-order tobacco is that prized in soft condition during the winter months, and, from the fact that it will not go through the May sweat in sweet condition, must be sold before warm weather. The buyer removes

it from the hogshead and redries it either by hanging it on sticks and letting the moisture evaporate, or by a machine redrier, the latter much the shorter process. The redried product is again prized in hogsheads of 1,000 to 1,200 pounds each.

The average yield per acre is from 900 to 1,100 pounds. As much as 2,500 pounds per acre is sometimes made.

A large part of the Burley tobacco is consumed in the United States, but a considerable quantity is exported to Great Britain, where it is manufactured into plug. Germany also takes low grades and, when the price is not too high, exports are made to France. In the United States this variety is used in the manufacture of twist and plug, both for chewing and smoking, and of granulated smoking tobacco and cigarettes.

#### DARK DISTRICTS OF KENTUCKY AND TENNESSEE.

The territory of Kentucky and Tennessee that grows dark tobacco is divided into several districts, all producing a heavy-bodied dark variety; the product of each district differs in some respect from that of the others in quality, method of curing, and use.

##### PADUCAH DISTRICT.

Ballard, Calloway, Carlisle, Fulton, Graves, Hickman, Livingston, Lyon, McCracken, and Marshall counties in Kentucky, and Benton, Carroll, Dyer, Henry, Obion, and Weakley in Tennessee make the Paducah district.

Planting usually begins about mid-May and should be completed by June 10; the method differs from that of any district hereinbefore named. The land is laid off in rows  $3\frac{1}{2}$  feet apart each way; at the intersection of the rows hills are made with hoes and the plants set by hand, preferably after rain.

The crop is usually harvested between August 25 and September 30. It is in some cases hung on scaffolds in the fields until the leaves are yellow, and afterwards cured in barns by open fires; in others it is hung in barns directly after cutting, and there allowed to become yellow before curing by fire begins. At one time a small amount of tobacco was flue-cured in this district, but at present the entire crop is cured by open-fire process.

After being thoroughly cured, the tobacco is assorted into various grades and lengths, tied in small bundles, or hands, of 5 to 10 leaves each and put in a bulk, the object being to prevent it from becoming either too dry or in too high order.

Several methods of selling are in vogue. A part of the tobacco raised in this district is bought at the barn by buyers who inspect and make contracts for it either at an agreed price for entire crops or at so much per pound for each grade delivered unprized at the

prizing houses. The loose-floor method of selling has recently been introduced and a small per cent is at present sold in that way. Part of the crop is sold by farmers after it has been prized in hogsheads. The tobacco delivered loose by the grower is in proper condition for prizes by the buyer without being redried, as it will pass through the sweat in softer condition than the air-cured or flue-cured tobacco. It is prized in hogsheads of from 1,500 to 1,800 pounds, averaging about 1,600, and is sold both privately and at auction.

The greater part of the tobacco grown in this district is exported to Great Britain, Italy, France, Germany, and Africa, with small amounts to various other countries. The remainder is used in the United States chiefly for making snuff, but also for the manufacture of cheap cigars, plug and smoking tobacco.

The average yield per acre is from 600 to 850 pounds.

#### HENDERSON OR STEMMING DISTRICT.

The following are the counties in this district: Breckinridge, Crittenden, Daviess, Hancock, Henderson, Hopkins, McLean, Muhlenberg, Ohio, Union, and Webster, in Kentucky; and Dubois, Spencer, and Warrick, in Indiana.

Planting, done by hand in rows  $3\frac{1}{2}$  feet apart each way, begins about May 25 and should be ended by June 20.

Harvest takes place during September; the plants are cut, hung on sticks, and taken to the curing barns. In Breckinridge, Daviess, Hancock, Ohio, and a part of McLean and Muhlenberg counties, the air-curing process is used, while in the rest of the district the crop is cured with open fires.

After curing, the tobacco is stripped from the stalks, assorted into several grades, tied in bundles, and sold "delivered" to buyers.

Nearly all the tobacco grown in this district is exported, Great Britain taking the bulk, with small amounts going to Italy and other countries. A greater quantity of the air-cured product than of the fired is consumed in the United States, although both are used in the manufacture of cheap cigars, plug and smoking tobacco. Tobacco for the British market is prepared in a different way than that for other markets; delivered upon the domestic market tied in large hands of half pound or more and in soft condition, the hands are untied, and the leaf, after having been assorted into various lengths and colors, is made into strips—that is, the stem or midrib is taken out. The product is then redried, either by hanging it on sticks or by steam process, and prized for export in hogsheads of about 1,200 pounds. A portion is redried and prized without being stemmed. All of the air-cured tobacco, if kept until warm weather, is redried, but is prized in softer condition for domestic use than for

shipment to Great Britain. Some of the air-cured tobacco is sold in hogsheads on the Louisville market.

The average yield per acre is from 700 to 900 pounds.

#### UPPER GREEN RIVER DISTRICT.

The following are the counties of this district: Adair, Barren, Butler, Edmonson, Grayson, Hardin, Meade, Metcalfe, Taylor, and Warren, Kentucky.

Planting is done by hand between May 15 and June 10—rows 3 to  $3\frac{1}{2}$  feet apart, plants 30 to 36 inches apart in the row.

The time of harvest is late August and September, the plants being cut, hung on sticks, taken to the barns, and air-cured. The leaves are then stripped from the stalks, assorted into different lengths and grades, tied in small hands of five to ten leaves, and sold to buyers who inspect and contract in the barns. By them it is put in hogsheads of 1,200 to 1,600 pounds. A large part of the crop is bought by manufacturers, the remainder by dealers who ship to the Louisville market and sell at auction.

This special type of tobacco, if kept until hot weather, should be prized in dry condition; or, if not, it should be taken from the hogshead and redried, as it will not pass through the sweat in soft order and be sound and sweet.

Tobacco grown in this district is known as "One Sucker," and is characterized by a long, narrow leaf, thick and tough; the better grades are used for making chewing tobacco, both natural-leaf twist and plug. Smoking tobacco is made from the low grades. The long tobacco is to some extent packed for the African trade and exported.

The average yield per acre is 700 to 900 pounds.

#### UPPER CUMBERLAND DISTRICT.

Allen, Clinton, Cumberland, Monroe, and Russell counties, in Kentucky, and Clay, Jackson, Macon, Overton, Pickett, Putnam, Smith, Sumner, and Trousdale counties in Tennessee, compose this district.

This district, like the Upper Green River district, grows "One Sucker" tobacco, and planting, harvesting, curing, and marketing are all done at the same time and in the same manner as in the last-named district.

The average yield per acre is 600 to 900 pounds.

#### CLARKSVILLE AND HOPKINSVILLE DISTRICT.

This district comprises the following counties: Caldwell, Christian, Logan, Simpson, Todd, and Trigg, in Kentucky, and Cheatham, Davidson, Dickson, Houston, Humphreys, Montgomery, Robertson, and Stewart, in Tennessee.

The usual time for planting is May 15 to June 10; it is all done by hand, usually after rain, in rows  $3\frac{1}{2}$  feet apart each way.

Harvest takes place August 20 to October 1; the plants are cut, hung on sticks in barns, and cured by open fires. The leaves are then stripped from the stalks, assorted in grades, lengths, and colors, and tied in small hands of five to ten leaves each.

Several methods of selling are practiced: A small part of the crop is contracted for at the barns and delivered loose to buyers; loose-floor markets are maintained at Clarksville and Hopkinsville; the bulk of the crop, however, is prized for the farmers by men who do it under contract, is stored in warehouses, and sold by sample at private sale by salesmen engaged for the purpose. The unprized tobacco, when delivered by the grower, is in fit condition for prizes without being redried. Auction sales are also held in Clarksville and Hopkinsville. The hogsheads weigh from 1,500 to 1,800 pounds, the fine grades being prized in lighter weights than common grades of leaf and lugs. Strips and dry leaf put up for the English market are prized in hogsheads of about 1,200 pounds.

Most of the tobacco from this district is exported to Great Britain, Italy, Germany, Austria, France, Spain, and Africa, and small quantities go to various other countries. Italy, Germany, and Austria take the finer grades, Great Britain both fine and common grades, and France, Spain, and Africa the commoner and cheaper grades.

The average yield per acre is 600 to 800 pounds. As much as 1,600 pounds per acre is sometimes made.

#### VIRGINIA SUN-CURED DISTRICT.

This district is composed of the counties of Caroline, Fluvanna, Goochland, Hanover, Henrico, King and Queen, King William, Louisa, New Kent, Orange, and Spotsylvania in Virginia.

The usual time of planting is May 20 to June 15—distance between rows  $3\frac{1}{2}$  to 4 feet and between plants in the row 24 to 30 inches. The planting, usually after rain, is all by hand.

September is the usual month for harvest, the process consisting of cutting and hanging the plants on sticks. When the weather is favorable they are hung on scaffolds and partly cured in the sun, after which they are hung in barns and air-cured. The leaves are then stripped, assorted into various grades, and sold on the loose-floor auction market in Richmond, Va. The better grades are used in the manufacture of chewing tobacco, the poorer ones in smoking tobacco for domestic use.

The average yield per acre is from 600 to 800 pounds.

## VIRGINIA DARK DISTRICT.

The following counties are in this district: Albemarle, Amelia, Amherst, Appomattox, Bedford, Botetourt, Brunswick, Buckingham, Campbell, Charlotte, Chesterfield, Cumberland, Dinwiddie, Greenesville, Lunenburg, Nelson, Nottoway, Powhatan, Prince Edward, Rockbridge, and Sussex in Virginia.

Planting is done by hand in rows from  $3\frac{1}{4}$  to  $3\frac{1}{2}$  feet apart, plants from 30 to 36 inches apart in the row; the usual time is from mid-May to mid-June.

Harvest is August 20 to September 30. The plants are cut, hung in barns on sticks, and cured with open wood fires. The leaves are afterwards stripped from the stalks, assorted, and sold on the loose-floor markets at different places in the district. The tobacco is then redried and prized in hogsheads of about 1,200 pounds each.

The greater part of the product is exported, Italy, Austria, Germany, and Great Britain being the principal buyers, and smaller amounts going to other foreign countries. Some of the finest grades are used for domestic plug wrappers; other grades are used in manufacturing cheap cigars, snuff, smoking tobacco, and for plug fillers.

The yield per acre is from 600 to 800 pounds.

## BRIGHT YELLOW DISTRICT.

## OLD BELT—VIRGINIA AND NORTH CAROLINA.

The following counties are in this district: Floyd, Franklin, Halifax, Henry, Mecklenburg, Montgomery, Patrick, Pittsylvania, Roanoke, and Washington in Virginia, and Alamance, Buncombe, Caswell, Chatham, Davidson, Davie, Durham, Forsyth, Granville, Guilford, Haywood, Madison, Moore, Orange, Person, Randolph, Rockingham, Stokes, Surry, Vance, Wake, Warren, Wilkes, and Yadkin in North Carolina.

Planting is usually done between May 10 and June 10, by hand, in rows 3 to  $3\frac{1}{2}$  feet apart, plants 30 to 36 inches apart in the row.

Harvesting should begin about mid-August and be completed by September 20. The plants are cut, hung in barns on sticks, and cured by the flue-curing process, which requires three or four days, after which they are ready to be put in bulk for stripping. This process of curing requires less time than any other, and the tobacco can be marketed less than a week after being taken from the field.

There are quite a number of loose-floor markets in this district, and upon them practically all of the crop is sold. It is taken from the loose-floor markets to the prize houses, where it is redried and prized in hogsheads of 1,000 to 1,200 pounds each.

This tobacco is used mostly in manufacturing chewing and smoking tobacco for domestic use, but a considerable quantity is exported, Great Britain being the largest importer.

The yield per acre is from 600 to 800 pounds.

#### NEW BELT—EASTERN NORTH CAROLINA AND SOUTH CAROLINA.

The following are the counties in this district: Beaufort, Bertie, Columbus, Craven, Cumberland, Duplin, Edgecombe, Franklin, Greene, Halifax, Harnett, Hertford, Johnston, Lenoir, Martin, Nash, Pitt, Robeson, Sampson, Wayne, and Wilson in North Carolina, and Bamberg, Barnwell, Chesterfield, Clarendon, Darlington, Florence, Horry, Kershaw, Marion, Marlboro, Orangeburg, Sumter, and Williamsburg in South Carolina.

The proper time for planting is from April 10 to May 15. The work is done by hand either after a rain or in freshly prepared ground—rows 3 to  $3\frac{1}{2}$  feet apart, and plants separated by 28 to 30 inches in the row.

Harvesting begins early in July, and should be completed by August 25; in South Carolina it is usually finished by the 1st of August. The leaves are primed from the stalk in the field as they ripen, beginning with the bottom ones, which ripen first. They are taken to the barns and looped on sticks with strings. The sticks are then hung in the barns and the leaves cured by the flue-curing process. Afterwards they are assorted and tied in small hands of 6 to 10 leaves, and offered for sale on the loose-floor markets. Sometimes the leaves are not assorted and tied, but are wrapped in large sheets and sold on the market to be assorted and tied by the buyer. The buyer redries and prizes them in hogsheads of 1,000 to 1,200 pounds. A portion of the crop is exported, Great Britain and Japan being the two largest foreign buyers, but by far the larger part is used in the manufacture of cigarettes and smoking tobacco for domestic use.

The yield per acre is from 500 to 800 pounds.

#### MARYLAND AND EASTERN OHIO EXPORT.

The following counties are in this district: Anne Arundel, Baltimore, Calvert, Carroll, Charles, Frederick, Harford, Howard, Montgomery, Prince George, and St. Mary in Maryland; Belmont, Guernsey, Monroe, Noble, and Washington in Ohio; and Jackson, Wirt, and Wood in West Virginia.

Transplanting is done by hand between May 20 and June 20—rows 3 to  $3\frac{1}{2}$  feet apart, and plants 24 to 30 inches apart in the row.

Harvest time is late August and September. The stalks are cut, hung on sticks in barns, and air-cured, except that in the northern part of Maryland a small quantity is cured with open fires.

A small quantity is bought at the barns by dealers, but most of the crop is redried by the farmers, prized in hogsheads of 500 to 800 pounds each, and sold in Baltimore through commission merchants.

The larger part is exported, France being the principal purchaser, and Holland and Germany taking smaller amounts. A small proportion is used for cheap cigars and smoking tobacco in the United States.

The average yield per acre is from 600 to 800 pounds.

#### PERIQUE—LOUISIANA.

Practically all of this type is grown in St. James Parish, La. Planting is done in March in rows 5 to 6 feet apart and plants 3 feet apart in the rows. The crop is harvested in June by cutting the plants and hanging them on wires stretched across the curing barns. A nail or piece of cane is driven at an acute angle into each stalk near the butt end, so as to form a kind of hook. By this means the tobacco is hung on the wires and allowed to air cure. The leaves, the stems being still green, are stripped from the stalks, a few at a time, when they reach the proper stage in curing. The stems or midribs are then taken out and the leaf made into loose twists. These are packed in boxes, dimensions 18 inches each way, with movable tops and bottoms and, by means of a lever and weights, put under pressure for twenty-four hours. The twists are then removed from the boxes and unrolled, so as to allow the leaves to absorb the juices that have been expressed. They are then twisted again and put through the same process every day for about two weeks, after which the manipulation is once in three or four days. As the curing process continues, the time the tobacco is allowed to remain in the boxes is lengthened, since the less the sap, the less the danger of damage. When the curing process is finished, which requires several months, the twists are packed in second-hand whisky barrels—about 500 pounds to the barrel—and sold. Formerly, instead of being packed in barrels, they were put in rolls or “carrots,” of 1 to 4 pounds each, wrapped in cotton cloth and wound with rope. In recent years, however, packing in barrels, which is the cheaper and quicker process, has largely supplanted the making of carrots.

The usual yield per acre is from 400 to 500 pounds.